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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/550,669	04/17/2000	Karen L. Harrison	IBMN.010US01 (0514)	1382

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Chambliss, Bahner & Stophel, P.C.
1000 Tallan Building
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Chattanooga, TN 37402

EXAMINER

PHAM, THIERRY L

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/550,669

Applicant(s)

HARRISON ET AL.

Examiner

Thierry L. Pham

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-11,13-21,23-26,28-36,38-41 and 43-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-11,13-21,23-26,28-36,38-41 and 43-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

- This action is responsive to the following communication: After Final Amendment filed on 10/31/05.
- Claims 1-6, 8-11, 13-21, 23-26, 28-36, 38-41, and 43-50 are pending in application; claims 7, 12, 22, 27, 37, and 42 have been canceled.

Response to Arguments

Applicant's arguments, see pages 2-7, filed 10/31/05, with respect to the rejection(s) of claim(s) 16 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art reference.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 16-20, 31-35, 46-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yacoub (U.S. 6552813), and in view of Suzuki et al (US 6606163).

Regarding claim 16, Yacoub discloses a multiplexer (server 460, fig. 4) for processing incoming print jobs, comprising:

- a multiplexer interface (print server 460, fig. 4, col. 2, lines 8-21) for examining job description attributes of a print job being received on a print channel and identifying the attribute of the print job (print server 460 identifies print job attributes, col. 4, lines 28-52); and
- a multiplexer processor component (print server 460 inherently includes CPU for processing incoming print job, col. 2, lines 8-21), interfaced with the multiplexer interface, for processing the incoming print job based upon the job description attribute of the incoming print job (print

Art Unit: 2624

server 460 processes the incoming print job and routes the print job to the best available printer based upon job attributes, figs. 2-5, col. 2, lines 5-30 and col. 4, lines 53-67 and col. 6, lines 46-67).

However, Yacoub fails to teach and/or suggest an identification of the attribute of the print channel associated with the print job (e.g. attribute of the print channel associated with the incoming print job).

Suzuki, in the same field of endeavor for printing, teaches an identification of the attribute of the print channel associated with the print job (print job with print queue spooling attribute, figs. 1-3, col. 17, lines 1-32).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify print server of Yacoub for identifying an identification of the attribute of the print channel associated the print job include as taught by Suzuki because of a following reason: (●) it enables the print system to process the incoming print job more efficiently (col. 7, lines 10-15 of Suzuki); (●) queuing/spooling a print job in to be printed at a later time helps to reduce network traffic congestions and to increase output performance of the printing system.

Therefore, it would have been obvious to combine Yacoub with Suzuki to obtain the invention as specified in claim 16.

Regarding claims 17-19, Yacoub further discloses the multiplexer of claim 16 wherein the multiplexer processor component determines whether the job description attributes and the print channel attributes dictate an output path, analyzes a state for a dictated output path (determine the output path is busy or free, col. 2, lines 8-21) when the job description attributes and the print channel attributes dictate an output path and routes the incoming print job to the dictated path when the state of the dictated path is free (restart and/or start printing once the output path is free or available, col. 3, lines 6-13).

Regarding claim 20, Yacoub further discloses the multiplexer of claim 17 further comprises a multiplexer output selector (server, Fig. 5) for receiving a user selection input to control spooling of jobs that are not required to be sent to a spooler or a print engine (i.e. sends

Art Unit: 2624

the documents to server or hard disk drive (HDD) without printing or spooling, which are known in the art), wherein the multiplexer processor component evaluates a setting for a user output selection when the job description attributes and the print channel attributes do not dictate an output path and routes the incoming print job based upon the setting for the user output selection.

Regarding claims 1-5: Claims 1-5 are the method claims corresponding to the apparatus claims 16-20 (respectively). The method claims are inherent and included by the operation of the apparatus claims. Please see claims rejection basis/rationale as described in claims 16-20 above.

Regarding claim 31, Yacoub discloses a print system, comprising:

- a print engine (printer, Fig. 5) for receiving a data stream for an incoming print job and generates print media based upon the data stream;
- a spooler (spool via a server, col. 2, lines 23-29) storing incoming print jobs until sent to the print engine; and
- a system controller (print server 460, fig. 4, col. 2, lines 8-21), coupled to the print engine and the spooler (printer server also servers as a spooler, fig. 4), for controlling the print engine, the spooler and the processing of incoming print jobs, the system controller including a multiplexer for managing the incoming print jobs, the multiplexer further comprising:
 - a multiplexer interface (print server 460, fig. 4, col. 2, lines 8-21) for examining job description attributes of a print job being received on a print channel and identifying the attribute of the print job (print server 460 identifies print job attributes, col. 4, lines 28-52); and
 - a multiplexer processor component (print server 460 inherently includes CPU for processing incoming print job, col. 2, lines 8-21), interfaced with the multiplexer interface, for processing the incoming print job based upon the job description attribute of the incoming print job (print server 460 processes the incoming print job and routes the print job to the best available printer based upon job attributes, figs. 2-5, col. 2, lines 5-30 and col. 4, lines 53-67 and col. 6, lines 46-67).

However, Yacoub fails to teach and/or suggest an identification of the attribute of the print channel receiving the print job.

Sonderegger, in the same field of endeavor for network communication including printer, teaches an identification of the attribute of the print channel receiving the print job (define and identify printer ports attribute, ref. 118, fig. 6), which is well known in the art at the time of the invention was made.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify print server of Yacoub for identifying an identification of the attribute of the print channel receiving the print job include as taught by Sonderegger because of a following reason: (●) to determine what type of print channel is being used (e.g. IPDS or Parallel port) for receiving the incoming print job; by doing so, it enables the print system to process the incoming print job more efficiently.

Therefore, it would have been obvious to combine Yacoub with Sonderegger to obtain the invention as specified in claim 31.

Regarding claims 32-35: claims 32-35 recites the limitations that are included in claims 17-20 (respectively); therefore, claims 32-35 are rejected for the same basis/rationale as described in claims 17-20 above.

Regarding claims 46-49: Claims 46-49 recite limitations correspond to claims 16-20 except computer readable memory medium for storing program is claimed rather than printing system or data output apparatus. All computers (i.e. server, Fig. 5) have some type of computer readable memory medium for storing program, hence claims 46-49 would be rejected using the same rationale as in claims 16-20.

Art Unit: 2624

Claims 6, 8-11 and 21, 23-26, 36, 38-41, 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yacoub and Suzuki as described in claim 16 above, and in view of Nagata (JP 411110163).

Regarding claim 21, Yacoub discloses the multiplexer of claim 20 wherein the multiplexer processor component prints the incoming print job when the incoming print job is not required to be spooled because of the job description attributes or the print channel attributes and the setting of the user output selection is PRINT ALL (all print jobs will be printed with selected printer that meet print jobs preferences, col. 2, lines 8-21 and col. 4, lines 53-67), spools the incoming print job when the incoming print job is not required to be printed because of the job description attributes or the print channel attributes and the setting of the user output selection is SPOOL ALL (all print jobs will be spooled by the server and later printed by the selected printer, col. 2, lines 22-29), prints the incoming print job when the printer is available.

However, combinations of Yacoub and Suzuki do not explicitly disclose wherein the incoming print job is not required to be printed because of the job description attributes or the print channel attributes and the setting of the user output selection is SPOOL WHEN BUSY and spools the incoming print job when the printer is busy, the incoming print job is not required to be printed because of the job description attributes or the print channel attributes and the setting of the user output selection is SPOOL WHEN BUSY.

Nagata, in the same field of endeavor for printing, discloses the incoming print job is not required to be printed because of the job description attributes or the print channel attributes and the setting of the user output selection is SPOOL WHEN BUSY and spools the incoming print job when the printer is busy, the incoming print job is not required to be printed because of the job description attributes or the print channel attributes and the setting of the user output selection is SPOOL WHEN BUSY (abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Yacoub and Suzuki as per teachings of Nagata because of a following reason: to use the printers efficiently and to reduce printed output time (Nagata, par. 5 of English translation).

Art Unit: 2624

Therefore, it would have been obvious to combine Yacoub and Suzuki with Nagata to obtain the invention as specified in claims 21.

Regarding claim 23, Yacoub further discloses the multiplexer of claim 22 wherein the print channel attribute is MUST PRINT (prints with selected printer, col. 2, lines 8-21) for print channels that provide bi-directional communication (network interface, Fig. 5) with a host.

Regarding claim 24, Yacoub further discloses the multiplexer of claim 23 wherein the print channel attribute is MUST PRINT for a IPDS port, Coax (network, Fig. 4), Twinax, AppleTalk, Despooler and Internal Print type print control modules.

Regarding claims 25-26, Yacoub further discloses the multiplexer of claim 23 wherein the print channel attribute is MAY SPOOL for Web Pull, Web Push, IPP, FTP, direct print ports (printer connected via network, Fig. 4), LPD, NetBIOS, 3 NetWare, Coas, Twinax and Parallel type print control modules.

Regarding claims 6, 8-11: Claims 6, 8-11 are the method claims corresponding to the apparatus claims 21, 23-26 (respectively). The method claims are inherent and included by the operation of the apparatus claims. Please see claims rejection basis/rationale as described in claims 21-27 above.

Regarding claims 36-41: claims 36-41 recites the limitations that are included in claims 21, 23-26 (respectively); therefore, claims 36-41 are rejected for the same basis/rationale as described in claims 21-27 above.

Claims 13-15, 28-30, 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yacoub, Nagata, and Suzuki described in claim 21, and in view of Olsen et al (U.S. 2002/0016921).

Art Unit: 2624

Regarding claims 28 & 30, the combinations of Yacoub, Nagata, and Suzukir as described in claim 21 above, do not explicitly disclose wherein the print job comprising of PDF and IDPS files.

Olsen, in the same field of endeavor for printing, discloses the print job comprising of PDF and IDPS files (p. 7, par. 79).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Yacoub, Nagata, and Suzuki as per teachings of Olsen because of a following reason: to use the printers efficiently and to reduce printed output time (Nagata, par. 5 of English translation).

Therefore, it would have been obvious to combine Yacoub and Nagata with Nagata to obtain the invention as specified in claims 28 & 30.

Regarding claim 29, Yacoub further discloses the multiplexer of claim 28 wherein the multiplexer processor component spools the PDF file to allow the PDF file to be converted to PostScript before printing (col. 8, lines 18-28).

Regarding claims 13-15: Claims 13-15 are the method claims corresponding to the apparatus claims 28-30 (respectively). The method claims are inherent and included by the operation of the apparatus claims. Please see claims rejection basis/rationale as described in claims 28-30 above.

Regarding claims 43-45: claims 43-45 recite the limitations that are included in claims 28-30 (respectively); therefore, claims 43-45 are rejected for the same basis/rationale as described in claims 28-30 above.

Claim 50 corresponds to claim 21 except computer readable memory medium for storing program is claimed rather than printing system or data output apparatus. All computers (i.e. servers, fig. 5) have some type of computer readable memory medium for storing computer programs, hence claim 50 would be rejected using the same rationale as in claim 21.

Art Unit: 2624

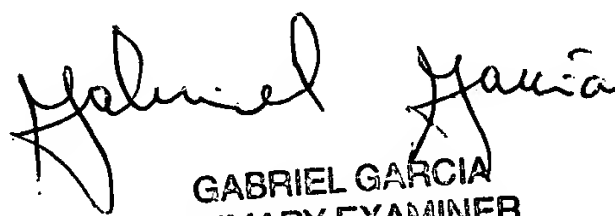
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L. Pham whose telephone number is (571) 272-7439. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thierry L. Pham



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PRIMARY EXAMINER